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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/244,163    02/04/99    SHIOTSUKA

H    35.C13307

EXAMINER

005514    MMC2/0308  
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WILLIAMS, A  
ART UNIT

PAPER NUMBER

2826  
DATE MAILED:

03/08/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

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# Office Action Summary

Application No.  
**09/244,163**

Applicant(s)  
**Shiotsuka et al.**

Examiner  
**Alexander Williams**

Group Art Unit  
**2826**



☒ Responsive to communication(s) filed on Dec 15, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-64 is/are pending in the application.

Of the above, claim(s) 9-24, 33-48, and 57-64 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-8, 25-32, and 49-56 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☒ Claims 1-64 are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 12

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

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--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Serial Number: 09/244163 Attorney's Docket #: 35.C13307

Filing Date: 2/4/99; claimed foreign priority to 2/5/98 and 2/2/99

Applicant: Shiotsuka et al.

Examiner: Alexander Williams

Applicant's Response in Paper # 14, filed 12/18/00, has been acknowledged.

Applicant's Declaration in Paper # 13, filed 12/18/00, has been acknowledged.

This application contains claims 9-24, 33-48 and 57-64 are drawn to an invention non-elected without traverse in Paper No. 4.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the

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differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CAR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

The following rejecting apply to this application that also where applied in the search of the European patent application:

Claims 1-3, 25-27, 49 and 53 are rejected under 35 U.S.C. § 102(b) as being anticipated by J.R. Bohland "Possibility of Recycling Silicon PV Modules" Conference Record of the Twenty Sixth IEEE Photovoltaic Specialists Conference 1997, 29 September 1997 - 3 October 997, pages 1173-1175; Anaheim, CA.

For example, in claim 1, J. R. Bohland (whole document) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate.

Claims 1-3, 25-27 are rejected under 35 U.S.C. § 102(b) as being anticipated by Van Den Bongard J (DE 195 39 699 A).

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For example, in claim 1, Van Den Bongard J (see column 1, line 31 - column 3, line 57 claim 9 and figures 1 and 2) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate.

Claims 1 and 25 are rejected under 35 U.S.C. § 102(b) as being anticipated by Aida Shinji (Patent Abstracts of Japan Publication Number # 055617).

For example, in claim 1, Aida Shinji (see abstract) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate.

Claims 1, 2, 49 and 53 are rejected under 35 U.S.C. § 102(b) as being anticipated by

For example, in claim 1, show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate.

Claims 52 and 56 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bruton T M et al. "Re-Cycling of High Value, High Energy Content Components of Silicon PV Modules" PROCEEDING OF THE EUROPEAN PHOTOVOLTAIC SOLAR ENERGY CONFERENCE, 11 APRIL 1994, XP000881854.

For example, in claim 1, Bruton T M et al. (SEE PAGE 303, LEFT-HAND COLUMN, PARAGRAPH 2 - PAGE 303, RIGHT HANDED COLUMN, PARAGRAPH 5) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate.

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Claims 52 and 56 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kouzuma et al. (U.S. Patent # 5,215,598).

For example, in claim 1, Kouzuma et al. (Figure 9) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate (see column 3, line 62 - column 10, line 64).

Claims 51 and 55 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mori et al. (U.S. Patent # 5,660,645).

For example, in claim 1, Mori et al. (**Figures 1 to 3**) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate (see column 1, line 55 - column 10, line 56).

Claims 50 and 54 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kataoka et al. (EP Application # 0680097A2).

For example, in claim 1, Kataoka et al. (Figures 1 to 4 and table 1) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate (see page 19, line 10 - page 19, line 58).

Claims 1, 4-8, 25 and 28 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hammamoto et al. (U.S. Patent # 5,397,713).

For example, in claim 1, Hammamoto et al. (Figures 1 to 5) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate (see column 7, line 34 - column 10, line 34).

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Claims 1, 4-8, 25 and 28-31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kataoka et al. (EP Patent Application # 0 680 095 A2).

For example, in claim 1, Kataoka et al. (Figure 1) show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate (see page 10, line 29 - page 11, line 2).

Claims 1, 4 and 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Oshima Tatsuhiko (Patent of Abstracts of Japan Publication # 09289104).

For example, in claim 1, Oshima Tatsuhiko show a semiconductor device comprising a substrate, a filler and a semiconductor element which is detachable from the substrate (see abstract).

Claims 19 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kataoka et al. (EP Application # 0680097A2) in view of Lindmayer (U.S. Patent # 4,057,439).

See Kataoka et al. (Figures 1 to 4 and table 1) (see page 19, line 10 - page 19, line 58) and Lindmayer (see column 2, line 5 - column 2, line 39).

The listed references are cited as of future rejections related to interest to this application as the claims are now claimed, but not applied at this time.



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Field of Search	Date
U.S. Class and subclass: 257/433,466	2/15/01
Other Documentation: foreign patents and literature in 257/433,466	2/15/01
Electronic data base(s): U.S. Patents EAST	2/15/01

*Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. Papers should be faxed to Technology Center 2800 via the Technology Center 2800 Fax center located in Crystal Plaza 4-5B15. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center 2800 Fax Center number is (703) 308-7722 or 24. Only Papers related to Technology Center 2800 APPLICATIONS SHOULD BE FAXED to the GROUP 2800 FAX CENTER.*

Any inquiry concerning this communication or any earlier communication from the examiner should be directed to **Examiner Alexander Williams** whose telephone number is (703) 308-4863.

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Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center 2800 receptionist** whose telephone number is (703) 308-0956.

March 03, 2001



Primary Patent Examiner  
Alexander O. Williams